REMARKS

Claims 1-29 were pending in this application. No claims have been added or canceled. Hence, claims 1-29 remain pending in this application.

Claims 11 and 15 were amended to correct grammatical and typographical errors. No new matter was added.

Claim Rejections

Claims 11 and 15 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,720,745 (Lys et al.).

Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lys et al.

These rejections are respectfully traversed.

Arguments in support of the claims

As an initial matter, Applicants gratefully acknowledge the indication of allowable subject matter in claims 1-10 and 20-29. Claims 12-13 and 16-19 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

The present invention, as recited in independent claim 11, is directed to an LED based lighting system with thermal compensation capability. The system comprises, among other things, a temperature sensor connected to a microprocessor for detecting an operating temperature of the at least one LED array. Furthermore, an algorithm is stored on the microprocessor and configured to cause the microprocessor to compensate for differences in the operating temperature of at least one LED array.

Nowhere does Lys et al. disclose or suggest an algorithm stored in a microprocessor for causing the microprocessor to compensate for differences in the **operating temperature** of at least one LED array. The Examiner contends that col. 42, lines 21-24 and col. 43, lines 20-24 of Lys et al. discloses this aspect of the invention. Office Action, page 2. The cited passages are highlighted below along with their associated text for convenient reference.

> In another embodiment of the invention, the signal-generating device may be a detector of ambient conditions, such as a light meter or thermometer. Thus, **lighting conditions** may be varied in accordance with ambient conditions. **For example, arrayed LEDs may be programmed to increase room light as the external light entering the room from the sun diminishes at the end of the day. LEDs may be programmed to compensate**

> **for changes in color temperature as well, through a feedback mechanism.** Col. 42, lines 17-25 (emphasis added).
>
> The power module (not shown in FIG. 76) can be included in the **color thermometer**. The signal from the temperature transducer 1000 can be converted by the A/D converter 1001 and coupled to the data inputs of the microcontroller 1002 in the power module. **The microcontroller can then be programmed to assign a range of temperatures to a different color through the use of a lookup table associating temperatures with LED color register values.** Col. 43, lines 16-23 (emphasis added).

As can be seen, there is no mention of compensating for differences in the LED **operating temperature** in the cited passages (or anywhere else in Lys et al.). Lys et al. merely states that LEDs may be programmed to compensate for changes in **color temperature**, and that a microcontroller may programmed to assign a range of (color) temperatures to a different color. However, color temperature and operating temperature are two entirely difference concepts. Color temperature relates to the spectral properties of a light source, whereas operating temperature, as used in the claims, refers to the thermal condition at which the LEDs operate. For example, depending on the LED manufacturing process, LEDs operating at the same operating temperature may produce different colors, while LEDs operating at different operating temperatures may produce the same color. Therefore, LED operating temperature does not necessarily translate into color temperature.

Applicants' position is supported by the disclosure in Lys et al. that a user may measure the color temperature of particular lighting conditions using an electromagnetic radiation detector. Col. 46, lines 32-41. Such an electromagnetic radiation detector may be a photodiode, phototransistor, photomultiplier, channel-plate intensifier, charge-coupled devices, or intensified silicon intensifier target (ISIT) coupled to an A/D converter. Col. 46, lines 22-27. Note that the list of examples does not include thermal temperature measuring devices.

Accordingly, for at least the reasons stated above, Applicants respectfully request withdrawal of the rejection against independent claim 11.

As for dependent claims 14-15, although they may recite independently allowable subject matter, these claims depend from independent claim 11 and are therefore allowable for at least the same reasons. Accordingly, withdrawal of the rejection against claims 14-15 is also respectfully requested.

CONCLUSION

The rejections raised by the Examiner have been addressed and Applicants believe that the claims are now in condition for allowance, which action is respectfully requested. If any questions or issues remain and the resolution of which the Examiner feels will be advanced by a conference with the Applicants' attorney, the Examiner is invited to contact the attorney at the number noted below.

No fees are believed to be due, however the Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account 10-0447, reference 34822-00017 (DGN).

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